## Summary

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The present invention relates to an optical sensor for the monitoring of combustion processes in a combustion chamber wherein the optical sensor at least comprises a lens system facing the combustion chamber, a waveguide and a sheath surrounding the lens system and one end of the waveguide characterized in that the lens system consists of at least one essentially plano-concave lens and a double concave lens wherein the planar surface of the plano-concave lens is exposed to the combustion chamber. The invention also relates to a method for the manufacture of said sensor.

(Fig. 1)